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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,357	04/23/2001	Hiroyuki Kato	010408	2303
23850	7590	05/18/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006				JASTRZAB, KRISANNE MARIE
ART UNIT		PAPER NUMBER		
		1744		

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/839,357	KATO ET AL.
	Examiner Krisanne Jastrzab	Art Unit 1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
2a) This action is **FINAL**. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-29 is/are rejected.
7) Claim(s) 2,3 and 17 is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Specification

The abstract of the disclosure is objected to because of the inclusion of legal phraseology such as "comprising". Correction is required. See MPEP § 608.01(b).

Claim Objections

Claims 2-3 and 17 are objected to because of the following informalities: these claims contain text within parentheses which are not proper claim format in U.S. patent practice. The parentheses should be deleted, leaving the text within the body of the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-13, 15, and 26-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 12-13 and 26-27, these claims are found to be vague and indefinite because they improperly attempt to further limit a composition claim by that which it is intended to treat, however, such does not constitute a proper further limitation of the claimed subject matter because the intended avenue of treatment is not positively required by a composition claim.

With respect to claim 15, this claim is found to be vague and indefinite because it improperly attempts to further limit a composition claim with a method limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-10, 12-14, 16-17, 19-24 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11246309 Akinari et al., in view of Cardarelli U.S. patent No. 4,400,374.

Akinari et al., teach a sustained-release waterway treating composition, which is a substantially water-insoluble polymer, preferably a polyvinylalcohol, containing a biocide, preferably a quaternary ammonium. See the abstract.

Cardarelli teaches the known and expected use of polymer solubilities as claimed in the instant invention for effectively sustaining the release of biocides contained thereby. See the abstract and the claims

It would have been obvious to one of ordinary skill in the art to determine and apply the appropriate solubility rates for the composition of Akinari et al., as is taught in Cardarelli for the express purpose of sustaining the effective level of the biocide contained thereby.

Claim 1-6, 9-20 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaughn et al., U.S. patent No. 5,006,267 in view of Cardarelli.

Vaughn et al., teach a long-acting biocide, such as quaternary ammoniums including cetylpyridium halides, carried by a polymer of limited water solubility, for treatment of waste waters.

Cardarelli is applied as above.

It would have been obvious to one of ordinary skill in the art to determine and apply the appropriate solubility rates for the composition of Akinari et al., as is taught in Cardarelli for the express purpose of sustaining the effective level of the biocide contained thereby.

With respect to claim 15, Vaughn et al., clearly teach formation of the long-acting biocide in the same manner as that set forth in the instant claim. See the examples.

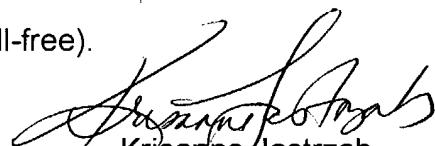
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Melnick et al., U.S. patent No. 4,043,911 teach the known and expected use of cetyl pyridinium chloride in waste water treatments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krisanne Jastrzab whose telephone number is (571) 272-1279. The examiner can normally be reached on Monday - Wednesday 6:30 a.m.- 4:00p.m and alternating Friday's..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Krisanne Jastrzab
Primary Examiner
Art Unit 1744

May 16, 2004